Timmis, S. (2017). Learning analytics: what is it and why do you need to know? *Post-16 Educator*, (89), 20-21.

Learning analytics: what is it and why do you need to know?

Sue Timmis

Over the past five to six years, there has been a noticeable rise of the new 'field' of learning analytics and its growing influence on learning and teaching at all levels of education. The term *learning analytics* is not always well understood but has been called the collection, measurement and monitoring of learner generated digital data (Ferguson, 2012). These developments are drawing significant attention from senior managers, administrators and IT services in colleges and universities, but are less well understood by teaching staff and students.

Learning analytics is a growing, international research field that is devoted to the study of the use of digital data, it has its own Society (Society for Learning Analytics Research - SOLAR(1)) and has just had its seventh international conference. The SOLAR website suggests that this is an inter-disciplinary network of leading international researchers, exploring the role and impact of analytics on teaching, learning, training and development. One of its stated aims is to raise awareness of learning analytics amongst policymakers in educational institutions and governments. Furthermore, the EU has a funded community hub for learning analytics called LACE and in the UK, there is to be a Learning Analytics Service, run by JISC (Joint Information Systems Committee). Whilst there are some voices within this community that do offer critical perspectives (e.g. Kirschner, 2016), in the main it is dominated by technically focused researchers and a broad enthusiasm for what is seen to be the enormous potential of using big data to improve learning. However, it is questionable how much consultation there has been with staff and students on these issues. Indeed, the broader post-16 education academic communities may be unaware of the extent of these research and development activities, and their reach and growing influence on education policy locally and nationally. This article aims to raise awareness of learning analytics and its growing influence on post-16 education and to offer a critical perspective on its value for teaching and learning and the kinds of data and purposes for which learning analytics are appropriated.

There is now a proliferation of digital data collected and stored on students (and staff) in universities and colleges across the world and it is no longer possible to be a student without engaging in online systems and processes (Dahlstrom et al, 2013). Feedback from such systems, for example through dashboards (intended to allow students to monitor their activities and behaviours), and through the repurposing of centralised, aggregated data, are claimed to offer the potential for adaptations, improvements and recommendations for learners, teachers and institutions as a whole. Yet, there has been a much slower pace of technologies designed to share control *with* students (Facer, 2011) and, I argue, the focus remains primarily on institutional benefits.

For example, the assertion that learning analytics can lead to improvements in retention and academic performance has led to the institutional adoption of early warning or predictive systems (see for example Colvin et al, 2016). This is in line with the trend towards a more individualistic and performative view of learning in post-16 education where the onus is on 'self regulation'. In other words, where the learner is expected to focus on their individual performance and address 'deficiencies' but with little control over their data and where little account is taken of the social and community aspects of learning. There are some new developments that are beginning to focus more on critical and student-led approaches (see for example the Learning Analytics Report Card project at University of Edinburgh (2)) but much more discussion is needed with lecturers and students to explore what might be the most useful ways in which student data might be exploited and what kinds of tools could be used to support students individually and collectively.

Furthermore, the issues around data management, ownership and sharing are likely to continue to multiply for both individuals and the organisations and networks they belong to. Indeed, the data flow within the post-16 education sector, at classroom, institution and national levels is already prolific. This raises ethical issues about the degree of consent students may have over the collection of such data and the purpose to which it is put. Equally important is the issue of how they can access, own or control their own personal data. In a recent review of the literature on learning analytics in relation to assessment, ethical issues seemed to be rarely raised in learning analytics research or when discussing its implementation (Timmis et all, 2016).

A report in the *Times Higher* claimed that 'seventy-one per cent of students questioned by JISC, the sector technology body, said they would be happy for data such as their library or virtual learning environment usage to be used by their university, if it could help to improve their grades.' (*THE*, 2016b). This presupposes that meaningful data will be analysed and that students will be able to understand and interpret this data in a way that is of benefit to them. Whilst this is not impossible, it is by no means a foregone conclusion. It also suggests potential conflicts in purposes of data being collected and stored and also that students may be being sold an overly positive message. The UK Learning Analytics Service that is being established is reported to be designed to feed into the Teaching Excellence Framework (*THE*, 2016a) and is therefore intended for institutions and policymakers, in direct contrast to the earlier reports that the purposes of learning analytics were mainly about student welfare and progress. It is this conflict that permeates much of the discussion of learning analytics and, whilst it is often claimed to be aimed at students, the evidence so far is less convincing.

Colleges and universities have previously fallen prey to technologically deterministic policies, for example the notion of a generation of 'digital natives' remains fixed in the minds of policymakers despite being thoroughly dismissed by research (Jones, 2013). I am cautioning that learning analytics is gaining credibility in policy circles in similar ways, through an over zealous belief in technology and through a learning analytics community that is principally focused on the potential of the technology, without there being sufficient scrutiny of what this entails, what measures are being proposed, the ethical implications and the validity of such measures. This is of particular concern in the UK, where frameworks for accountability and managing teaching 'excellence' are already mainstream in universities and similar performance metrics are in operation across the education sector as a whole, but this applies equally elsewhere, where similar regimes are being implemented or considered. It is in this context that the rise of learning analytics needs to be revealed and scrutinised, in particular by teaching staff and students who should be central to any discussions on its value and purpose.

Notes

1. https://solaresearch.org
2. http://www.de.ed.ac.uk/project/learning-analytics-report-card

References

Colvin, C., Rogers, T., Wade, A., Dawson, S., Gasevic, D., Buckingham Shum, S., Nelson, K., Alexander, S., Lockyer, L., Kennedy, G., Corrin, L., & Fisher, J. (2016). *Student retention and learning analytics: a snapshot of Australian practices and a framework for advancement*. Canberra, ACT: Australian Government Office for Learning and Teaching

Dahlstrom, E., Walker, J., & Dziuban, C. (2013). *The ECAR Study of Undergraduate Students and Information Technology* (Vol. 2010). Louisville

Facer, K. (2011) *Learning futures: Education, technology and social change*. Abingdon, Oxon, Routledge

Ferguson, R. (2012) *The state of learning analytics in 2012: A review and future challenges*. Technical Report KMI-12-01, Knowledge Media Institute (Milton Keynes, The Open University)

Jones, C. (2013) 'The digital university: A concept in need of definition', in: R. Goodfellow & M. Lea (Eds) *Literacy in the digital university: Critical perspectives on learning, scholarship, and technology*. Abingdon, Oxon, Routledge. 162-172

Kirschner, P. (2016) Learning Analytics: Utopia or dystopia. Keynote address - Learning Analytics Conference - 2016, University of Edinburgh

Times Higher Education (2016a) National learning analytics service: could it feed into the TEF? March 24th 2016

Times Higher Education (2016b) JISC finds most students 'happy to share data for learning analytics' February 25th 2016

Timmis, S., Broadfoot, P., Sutherland, R. & Oldfield, A. (2016, online 2015). 'Rethinking assessment in a digital age: opportunities, challenges and risks'. *British Educational Research Journal*, Vol 42 (3) pp 454-476.